#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 1.28

## WELDING INSPECTION REPORT

Resident Engineer: Casey, William **Report No:** WIR-027773 Address: 333 Burma Road **Date Inspected:** 14-Jun-2012

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1930 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV Contractor: American Bridge/Fluor Enterprises, a JV **Location:** Job site

**CWI Name:** As Noted Below **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No **Weld Procedures Followed:** Yes No N/A **Qualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes N/A **Delayed / Cancelled:** No

34-0006 **Bridge No: Component:** OBG/Tower

## **Summary of Items Observed:**

Quality Assurance Inspector (QA) Rodney Patterson was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

### OBG 13E Deck Drop-in

This QA observed ABF/JV QC inspector William Sherwood performing Magnetic Particle Testing and visual confirmation of weld repair excavations that were gouged out the previous shift. The weld is a longitudinal Complete Joint Penetration (CJP) butt joint between the deck and the deck drop-in and is designated as 13E-E2.8. The ABF/JV QC discovered a 3mm diameter pore of wormhole porosity at Y location 1470, at a depth of 15mm in the excavated weld. The ABF/JV QC were aware of the requirements for engineers approval prior to welding at this location due to the achieved depth of the excavation in a fracture critical weld. (See attached photos for details)

#### OBG 13E Deck Drop-in (Panel Point 123.5)

The QA inspector periodically observed ABF/JV qualified welder Khit Lounechaney #4985 performing Shielded Metal Arc Welding (SMAW) in the 2G position utilizing the Caltrans approved Welding Procedure Specification ABF-WPS-D1.5-1080. The weld is a Complete Joint Penetration (CJP) Tee joint between the horizontal floor beam flange and vertical floor beam flange at panel point 123.5. The weld is designated as 13E-PP123-E2.1-BF2. The weld surface and surrounding area was brought to temperature by the use of a gas torch and the preheat temperature was confirmed by ABF personnel prior to welding. The welding at this location was observed to be complete prior to the end of the QA inspectors shift.

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#### OBG 13E Deck Drop-in (Panel Point 123)

The QA inspector observed at random intervals ABF/JV qualified welder Richard Garcia #5892 performing Shielded Metal Arc Welding (SMAW) in the 2G position utilizing the Caltrans approved Welding Procedure Specification ABF-WPS-D1.5-1080. The weld is a Complete Joint Penetration (CJP) Tee joint between the horizontal floor beam flange and vertical floor beam flange at panel point 123.5. The weld is designated as 13E-PP123-E2.1-BF2. The weld surface and surrounding area was brought to temperature by the use of a gas torch and the preheat temperature was confirmed by ABF personnel prior to welding. The welding at this location was observed to be complete from face "A" prior to the end of the QA inspectors shift and will require back gouge and welding at a later time.

# OBG 13E Deck Drop-in repairs

This QA inspector observed ABF/JV personnel performing the final overhead grinding operations of the lift 13 East deck weld reinforcement west of panel point 122.5 that was welded on an earlier shift. The QC inspector Salvador Merino was present in order to monitor the progression of work inspecting the grinding at the weld toe to ensure sufficient blending prior to final UT and MT inspection.

This QA spent a portion of this reviewing and documenting the status and completion of various production welding tracking logs for lift 13E/14E drop-in deck work currently in-process. The QA recorded the information on the OBG tracking log.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

#### **Summary of Conversations:**

No relevant conversations.





#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Patterson, Rodney Quality Assurance Inspector **Reviewed By:** Levell,Bill QA Reviewer